



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/606,565	06/26/2003	Nambirajan Seshadri	14169US02	4707
23446	7590	11/24/2008	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661				WONG, BLANCHE
ART UNIT		PAPER NUMBER		
2419				
			MAIL DATE	
			DELIVERY MODE	
			11/24/2008	
			PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/606,565	SESHADRI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Blanche Wong	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 11 August 2008.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-30 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-30 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 11 August 2008 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____.   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1,10,11,20,21,30 are objected to because of the following informalities:

With regard to claim 1, Examiner suggests replacing “said at least a first wireless access point” in line 6 with “said first wireless access point”.

With regard to claim 1, Examiner suggests replacing “each of said at least one of said plurality of access devices” in line 7 with “said at least one of said plurality of access devices”.

With regard to claim 1, Examiner suggests replacing “another device” in line 9 with “another access device”.

With regard to claim 1, Examiner suggests adding “wherein” before “whenever” in line 12.

With regard to claim 1, Examiner suggests removing “wherein” in line 13.

With regard to claim 10, Examiner suggests replacing “wherein one or both of said first wireless point and/or said at least one of a plurality of access devices” in lines 1-2 with “wherein at least one of said first wireless access point and said at least one of said plurality of access devices”.

With regard to claim 11, Examiner suggests replacing “said at least a first wireless access point” in line 9 with “said first wireless access point”.

With regard to claim 11, Examiner suggests replacing “each of said at least one of said plurality of access devices” in line 10 with “said at least one of said plurality of access devices”.

With regard to claim 11, Examiner suggests replacing “another device” in line 12 with “another access device”.

With regard to claim 11, Examiner suggests adding “wherein” before “whenever” in line 15.

With regard to claim 11, Examiner suggests removing “wherein” in line 16.

With regard to claim 20, Examiner suggests replacing “wherein one or both of said first wireless point and/or said at least one of a plurality of access devices” in line 2 with “wherein at least one of said first wireless access point and said at least one of said plurality of access devices”.

With regard to claim 21, Examiner suggests replacing “said at least a first wireless access point” in line 7 with “said first wireless access point”.

With regard to claim 21, Examiner suggests replacing “each of said at least one of said plurality of access devices” in line 8 with “said at least one of said plurality of access devices”.

With regard to claim 21, Examiner suggests replacing “another device” in line 10 with “another access device”.

With regard to claim 21, Examiner suggests adding “wherein” before “whenever” in line 13.

With regard to claim 21, Examiner suggests removing “wherein” in line 14.

With regard to claim 30, Examiner suggests replacing “wherein one or both of said first wireless point and/or said at least one of a plurality of access devices” in line 2 with “wherein at least one of said first wireless access point and said at least one of said plurality of access devices”.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claims 10,20,30** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With regard to claims 10,20,30, it is unclear whether “and/or” in line 2 is “and”, “or”, or both.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1,2,8-10,11,12,18-20,21,22,28-30** are rejected under 35 U.S.C. 102(b) as being anticipated by Aihara (U.S. Pat No. 6,505,043).

With regard to claims 1,11,21, Aihara discloses coupling a first wireless access point (**BTSSs in cells**) located in a first cell of the mesh network to at least a second wireless access point (**BTSSs in cells**) located in a second cell of the mesh network (**See Fig. 2**); providing service initially to at least one of a plurality of access devices (**mobile terminal**) in the mesh network by said first wireless access point located in said first cell (**first connecting base station**) ("**a mobile terminal connected to the first connecting base station**", col. 2, line 30), wherein each of said at least one of said plurality of access devices generates and maintains a handoff candidate list one its own without being prompted to do so by another access device; and serving within the mesh network, said at least one of a plurality of access devices (**mobile terminal**) by said at least a second wireless access point located in said second cell (**second connecting base station, col. 2, line 39**), whenever a signal (**electromagnetic waves**) for said at least one of a plurality of access devices falls below a specified threshold ("**if electric field intensities of electromagnetic waves transmitted from the base station to the mobile station are lowered, then a hand-over request ...**", col. 8, lines 54-56), said at least a second wireless access point is selected from said handoff candidate list ("**... selects such a base station functioning**

**as a hand-over destination based upon the measured electric field strength”, col. 9, lines 14-15).**

With regard to claims 2,12,22, Aihara further discloses said second cell is a neighboring cell located adjacent to said first cell (“**listed in the neighbor list”, col. 8, line 67).**

With regard to claim 8,18,28 Aihara discloses at least a third wireless access (**See Fig. 2) (If two cells are made into one cell, then there are two BTSSs in one cell).**

With regard to claims 9,10,19,20,29,30 Aihara discloses when said signal for said at least one of a plurality of access devices falls below said specified threshold (“**if electric field intensities of electromagnetic waves transmitted from the base station to the mobile station are lowered, then a hand-over request …”, col. 8, lines 54-56).**

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 3-6,13-16,23-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Aihara in view of Gray (U.S. Pat No. 6,108,323).

With regard to claims 3,4,13,14,23,24, Aihara discloses the method according to claims 2 and 3 respectively. However, Aihara fails to explicitly show beamforming antenna coupled to an access point.

Gray discloses beamforming antenna coupled to an access point (**a beamforming antenna of a base station, col. 3, lines 45-46**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine beamforming antenna coupled to an access point as taught in Gray with Aihara in order to allow system capacity and demand on system resources to be dynamically adjusted. Gray, col. 3, lines 22-23.

With regard to claims 5,15,25, the combination of Aihara and Gray discloses the method of claim 4.

Gray further discloses an uplink channel (**forward link with one or more base stations, col. 3, line 44**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine an uplink channel as taught in Gray with Aihara in order to provide for communication.

With regard to claims 6,16,26, the combination of Aihara and Gray discloses the method of claim 4.

Gray discloses a downlink channel (**forward link with one or more base stations, col. 3, line 44**) (**the base station that receives the forward link, has the downlink**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine a downlink channel as taught in Gray with Aihara in order to provide for communication.

8. **Claims 7,17,27** are rejected under 35 U.S.C. 103(a) as being unpatentable over Aihara and Gray as applied to claim 6 above, and further in view of Noll et al. (U.S. Pat No. 7,092,714).

With regard to claims 7,17,27, the combination of Aihara and Gray discloses the method according to claim 6. However, the combination does not explicitly show a backhaul channel.

Noll discloses a backhaul channel (**a backhaul channel, col. 1, line 36**).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine a backhaul channel as taught in Noll with Aihara and Gray in order to provide for communication with repeaters for receiving and transmitting information to/from the mobile communications devices. Noll, col. 1, lines 31-33.

***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blanche Wong whose telephone number is 571-272-3177. The examiner can normally be reached on Monday through Friday, 830am to 530pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571-272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Blanche Wong/  
Examiner, Art Unit 2419  
November 10, 2008

/Salman Ahmed/  
Examiner, Art Unit 2419